



**Manual**  
**Hydrostatic Water Depth Probe**  
**Model 6542D**



**Revision History**

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## 1.0 INTRODUCTION

This manual describes the operation of a submersible pressure and temperature probe (Model 6542D) in a Starlog data logging system.

This probe is an INW submersible pressure and temperature smart sensor PT12/SDI-12

For more info please refer to INW:

PT12/SDI-12 Datasheet user guide: [PT12 SDI-12 Datasheet](#)

PT12/SDI-12 Typical Specs: [PT12 SDI-12 Typical Specs](#)

PT12/SDI-12 User Manual: [PT12 SDI-12 Manual.pdf](#)

## 1.1 Models

The Water Depth Probe is available in 3.5m, 10m and 20m ranges. It can come in stainless steel or titanium housing. Cable length is to be specified at the TIME of order.

The model numbers are:

Model	Depth Range	Housing	Resolution
6542D-A	0 to 3.5 metre	Stainless Steel	±3.5mm
6542D-B	0 to 10 metres	Stainless Steel	±10mm
6542D-C	0 to 20 metres	Stainless Steel	±21mm
6542D-T-A	0 to 3.5 metre	Titanium	±3.5mm
6542D-T-B	0 to 10 metres	Titanium	±10mm
6542D-T-C	0 to 20 metres	Titanium	±21mm
6542D-CBL	NA	To be used with SS probe	
6542D-T-CBL	NA	To be used with Titanium probe	

## 2.0 USING THE HYDROSTATIC WATER DEPTH PROBE WITH STARLOG

Unidata's instruments are designed for automatic monitoring and collection of data in a Starlog data logging system. When the instruments are connected to any Unidata logger range, data sensed by the instruments is logged and stored according to a program you define using Starlog V4 Software.

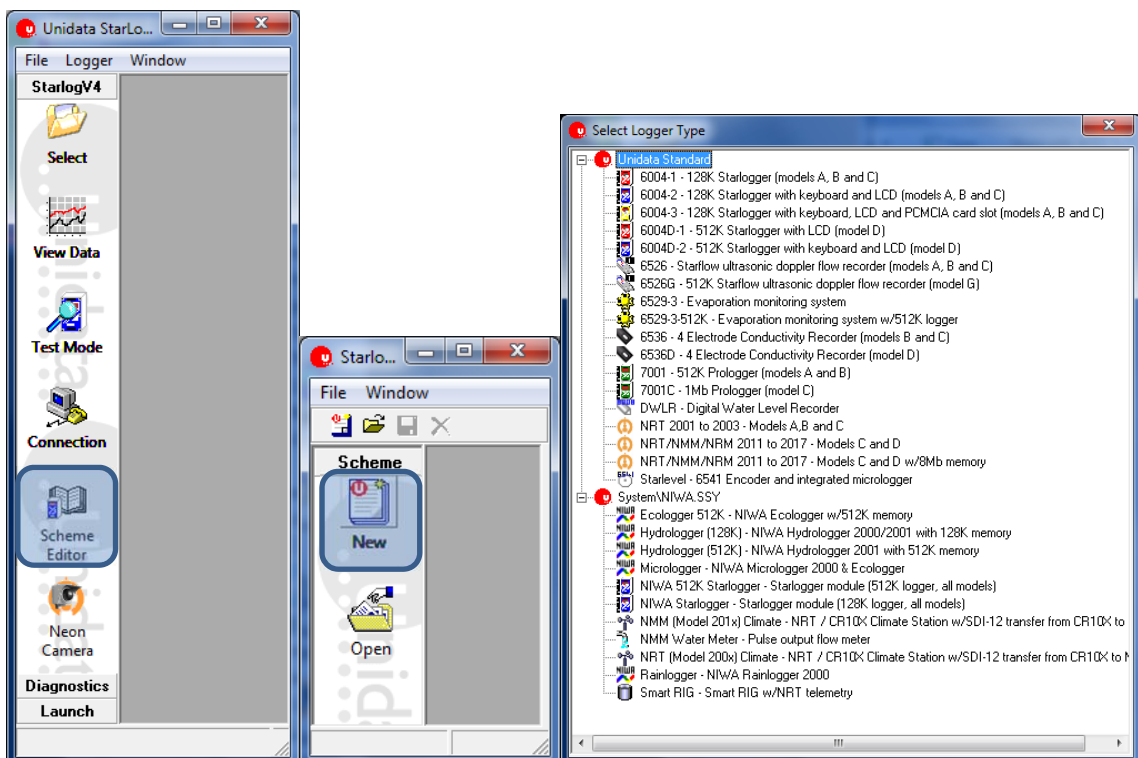
This section provides you with information you will find helpful in creating and executing a Water Depth Monitoring Scheme.

### 2.1 Choosing a Logger

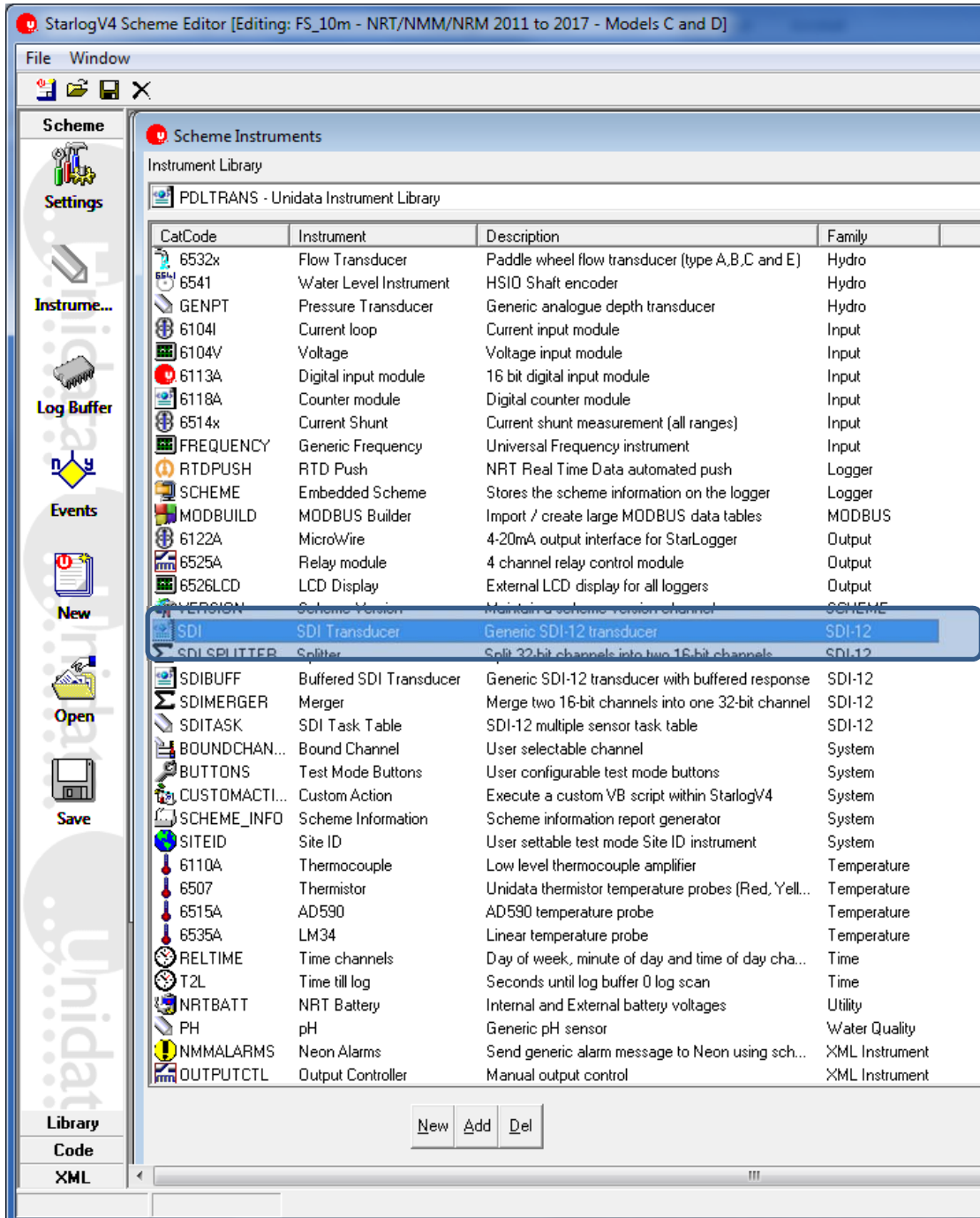
Any of the Starlog range of data loggers or Neon NRTs can be used with this instrument to record water depth and temperature.

#### 2.1.1 Creating a 6542 Water depth and Temperature scheme

1. Open the **Scheme Editor**, **New** and **Select Logger Type** (Starlogger or NRT range)



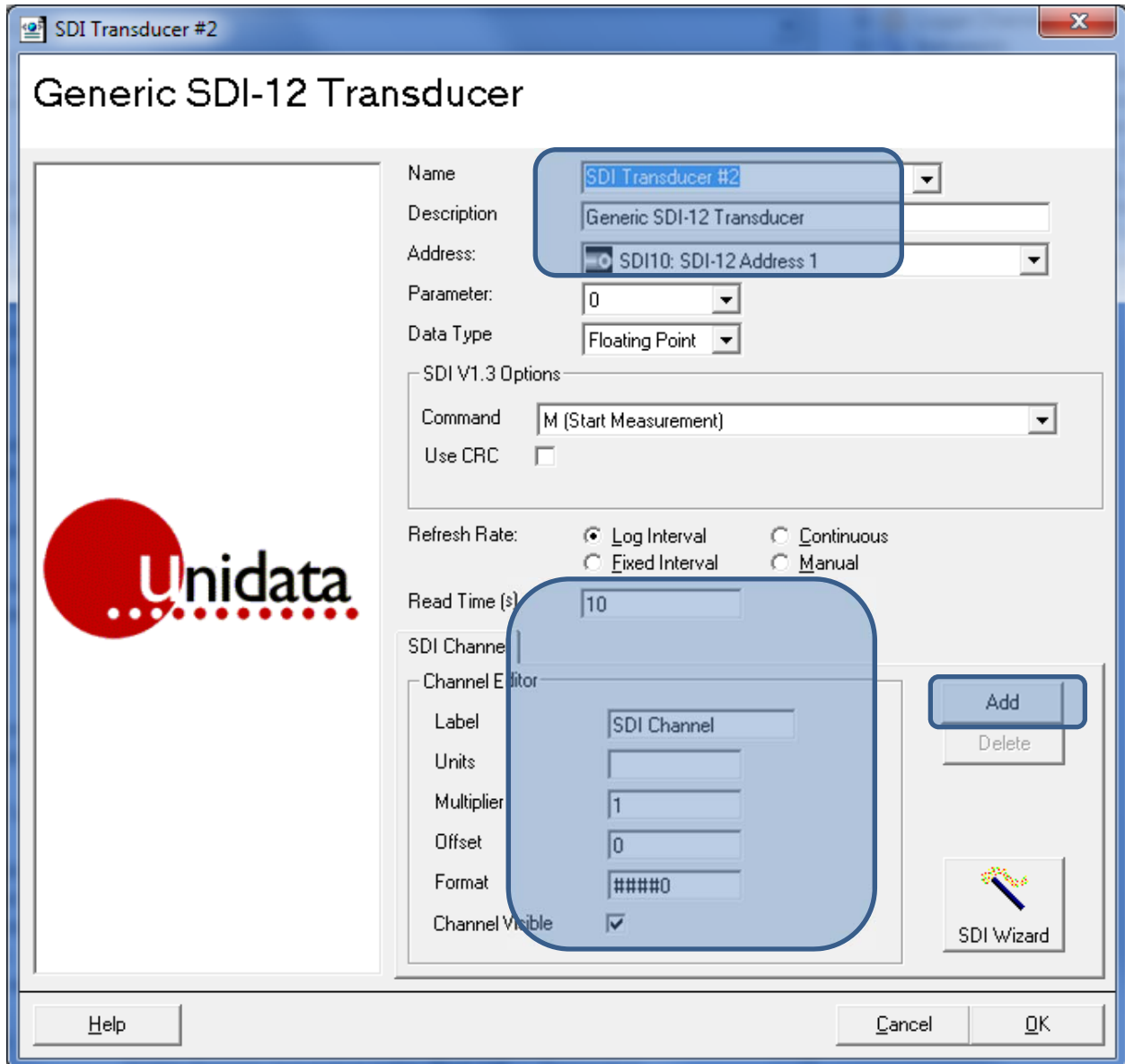
2. Select the **Instruments** menu, then select SDI Transducer – Generic SDI-12 transducer Instrument and **Add Instrument**



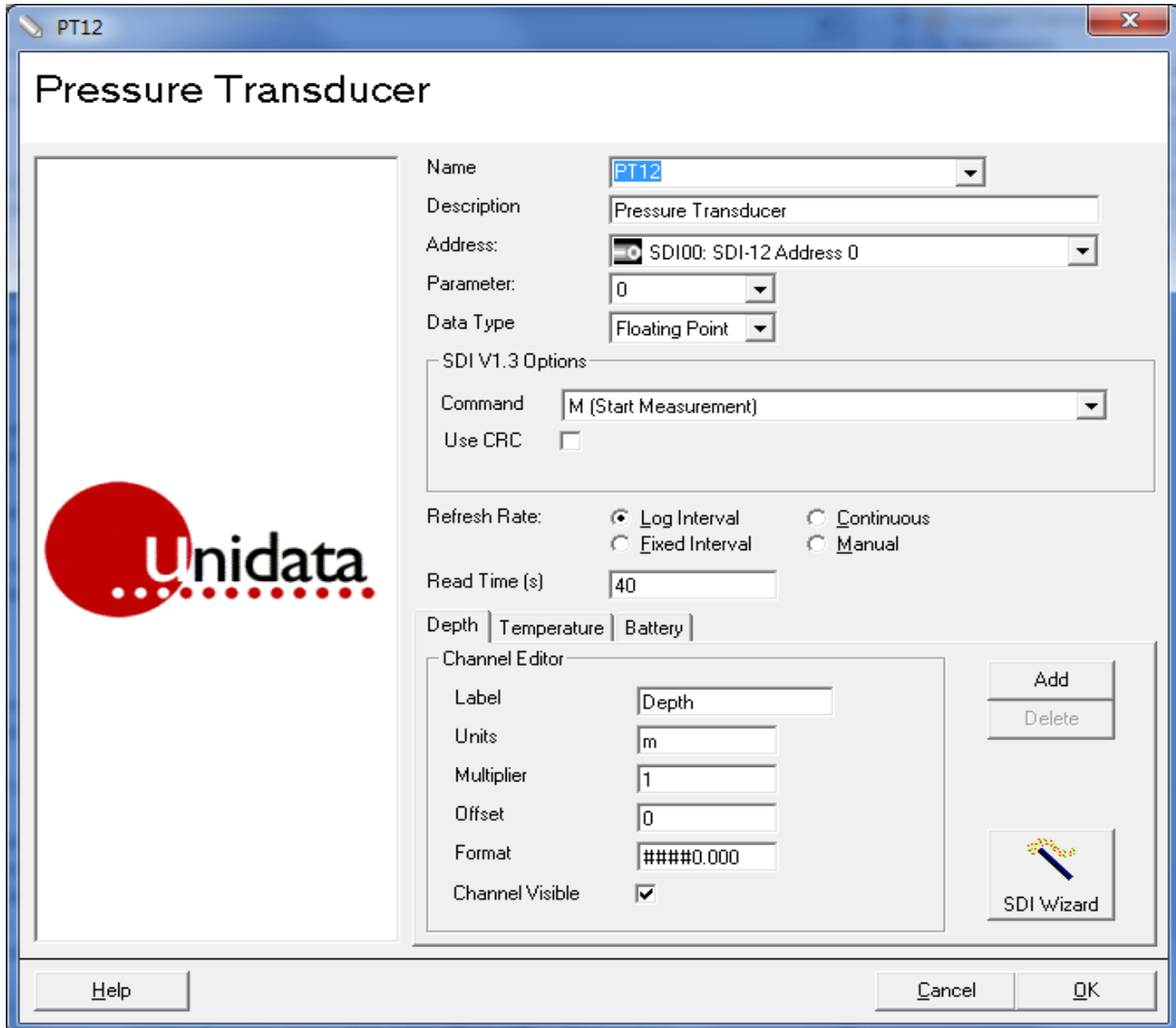
3. Double click on the newly added instrument to edit transducer's name, description and SDI12 Address.

Edit channel info: label, units, multiplier, offset and format

To add additional channels select Add

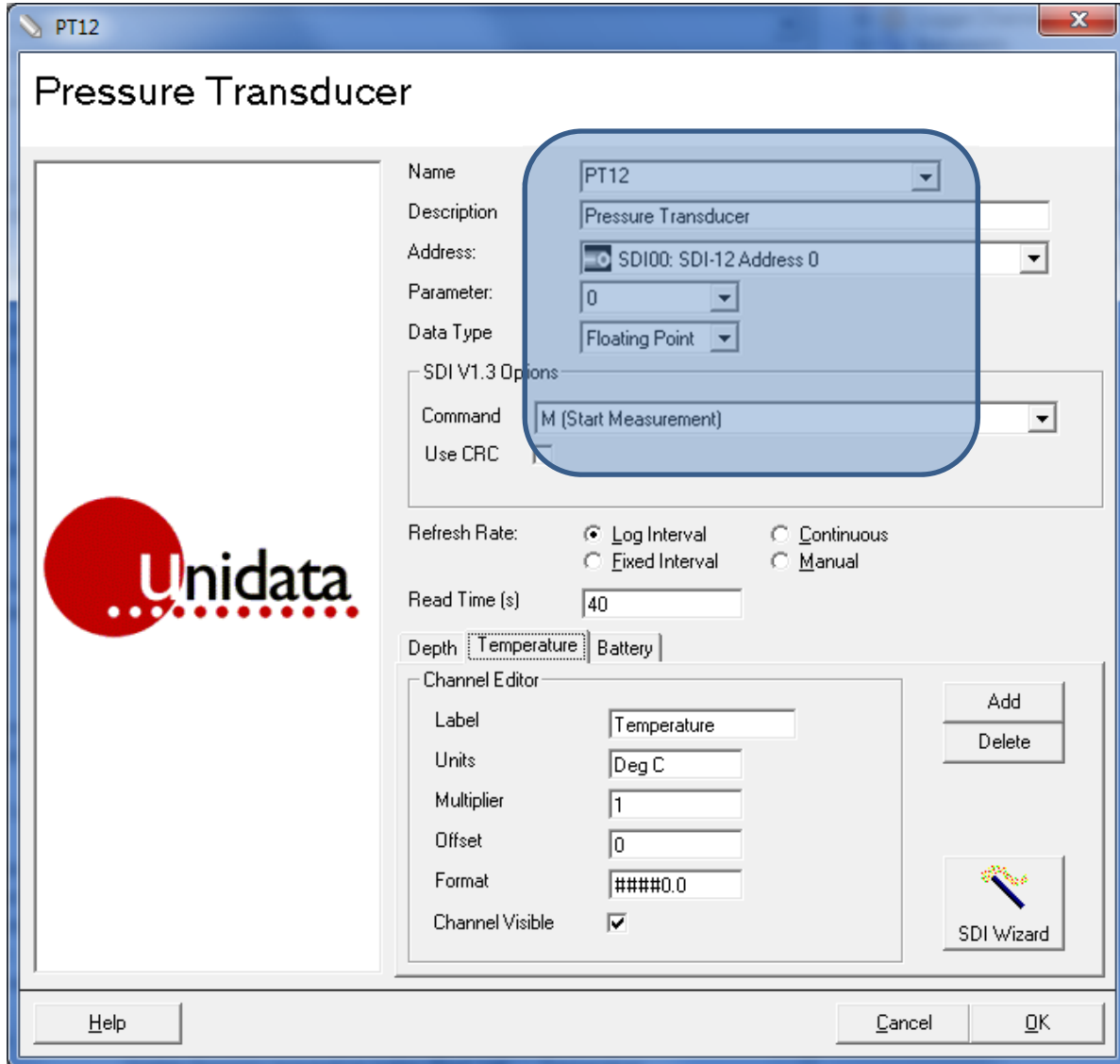


Editing Channel “Depth”

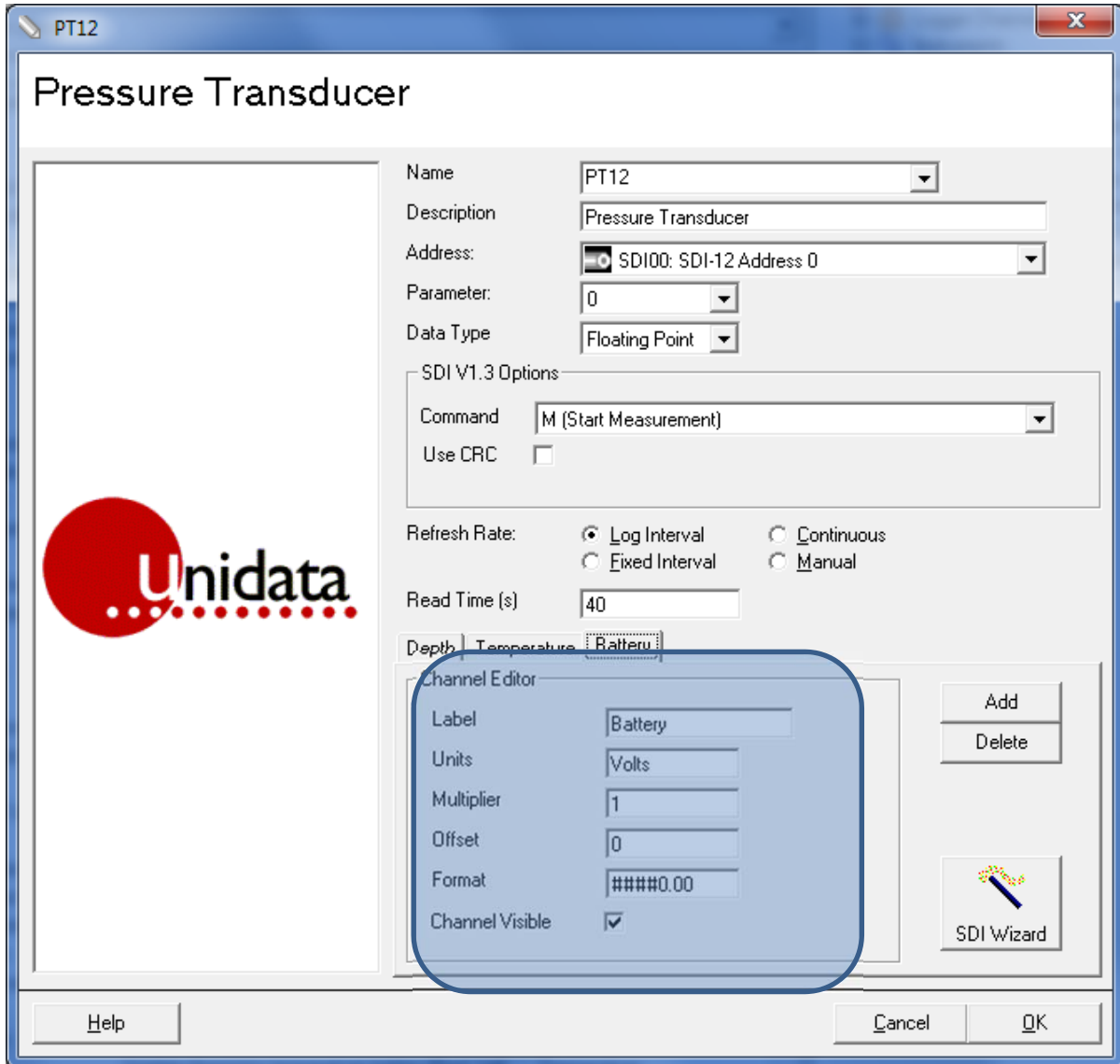




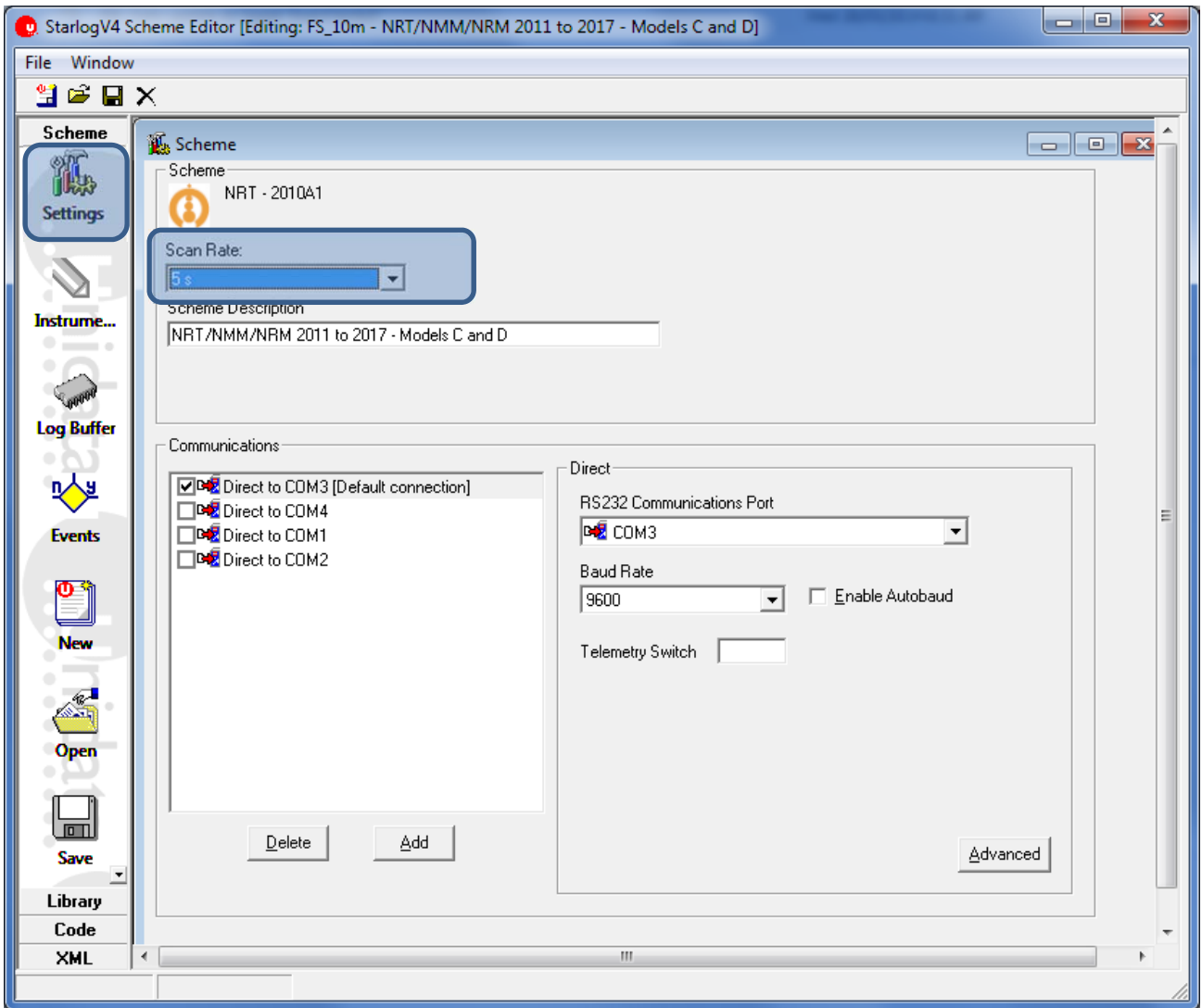
Adding and editing channel “Temperature”



Adding and editing channel “Battery”



Click OK once all channels are complete, making sure the Read Time(s) is set to a multiplier of the scan rate.

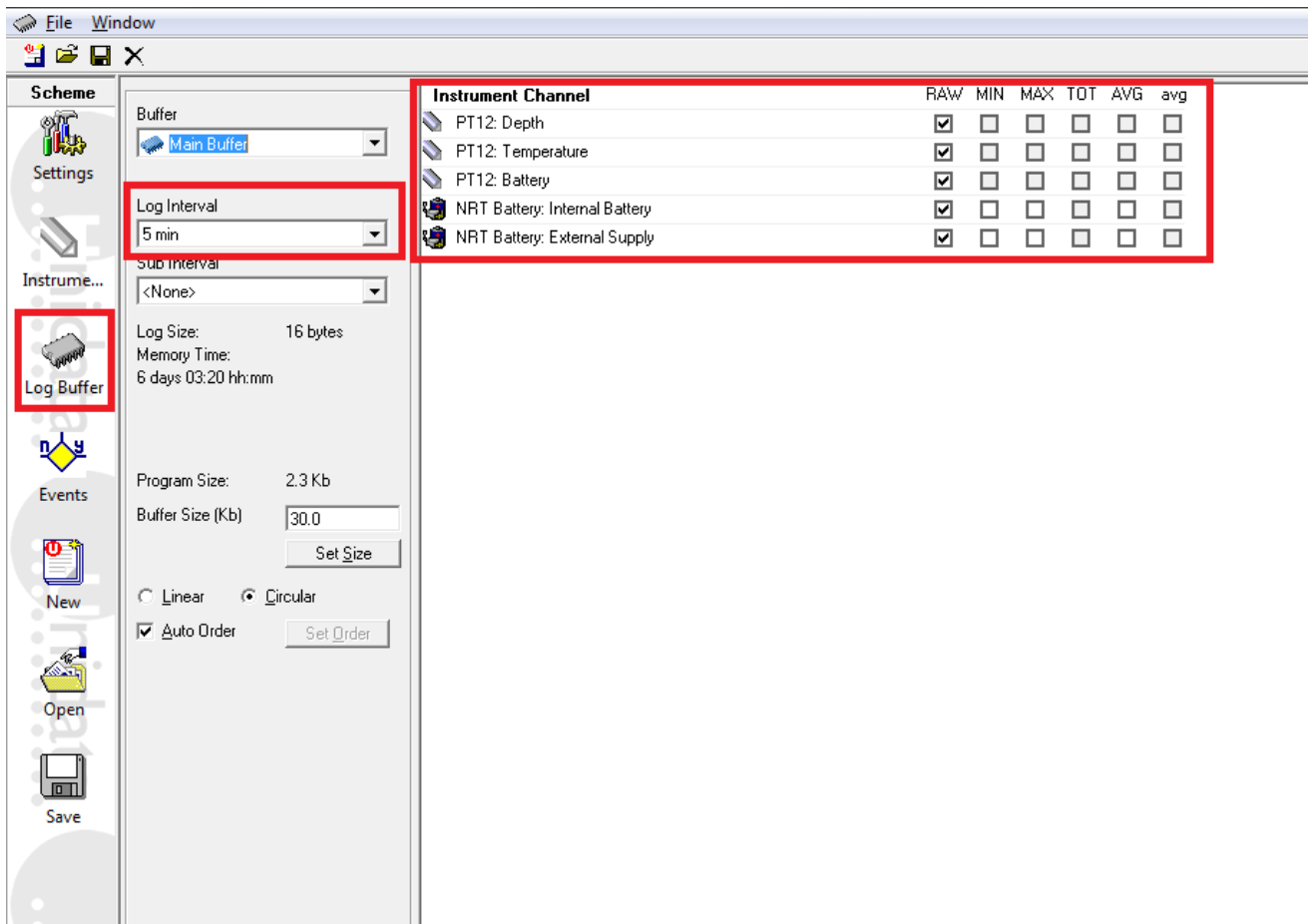


### 2.1.2 What to Log

Raw – the value read at the log interval

Make the following selections in the Log Buffer window:

Open the log buffer window and select the RAW values that you would like to record and the log interval (how often to record readings), an example shown below is recording values every 5 minutes.



### 3.0 SPECIFICATIONS

Range (metres of water): 3.5  
Accuracy (mm):  $\pm 3.5$   
Resolution (mm): 0.05

Range (metres of water): 10.5  
Accuracy (mm):  $\pm 10.5$   
Resolution (mm): 0.16

Range (metres of water): 21  
Accuracy (mm):  $\pm 21.5$   
Resolution (mm): 0.32

Operating Temp:  $-5^{\circ}\text{C} - 70^{\circ}\text{C}$   
Over Range Protection: up to 2 times fs  
Operating Voltage: 9.0 – 16VDC  
Power Supply Current: Active 3mA average / 10mA peak  
Power Supply Current: Sleep 150 $\mu\text{A}$   
Digital Output: SDI-12 v1.3  
Diameter: 19mm  
Length: 203mm long  
Weight: 400 g  
Casing: Marine grade stainless steel 316 or titanium  
Vented cable: 8.7mm OD, black polyurethane jacket, braided screen